

BIRDS OF BUCHANAN COUNTY, IOWA

BY FRED J. PIERCE

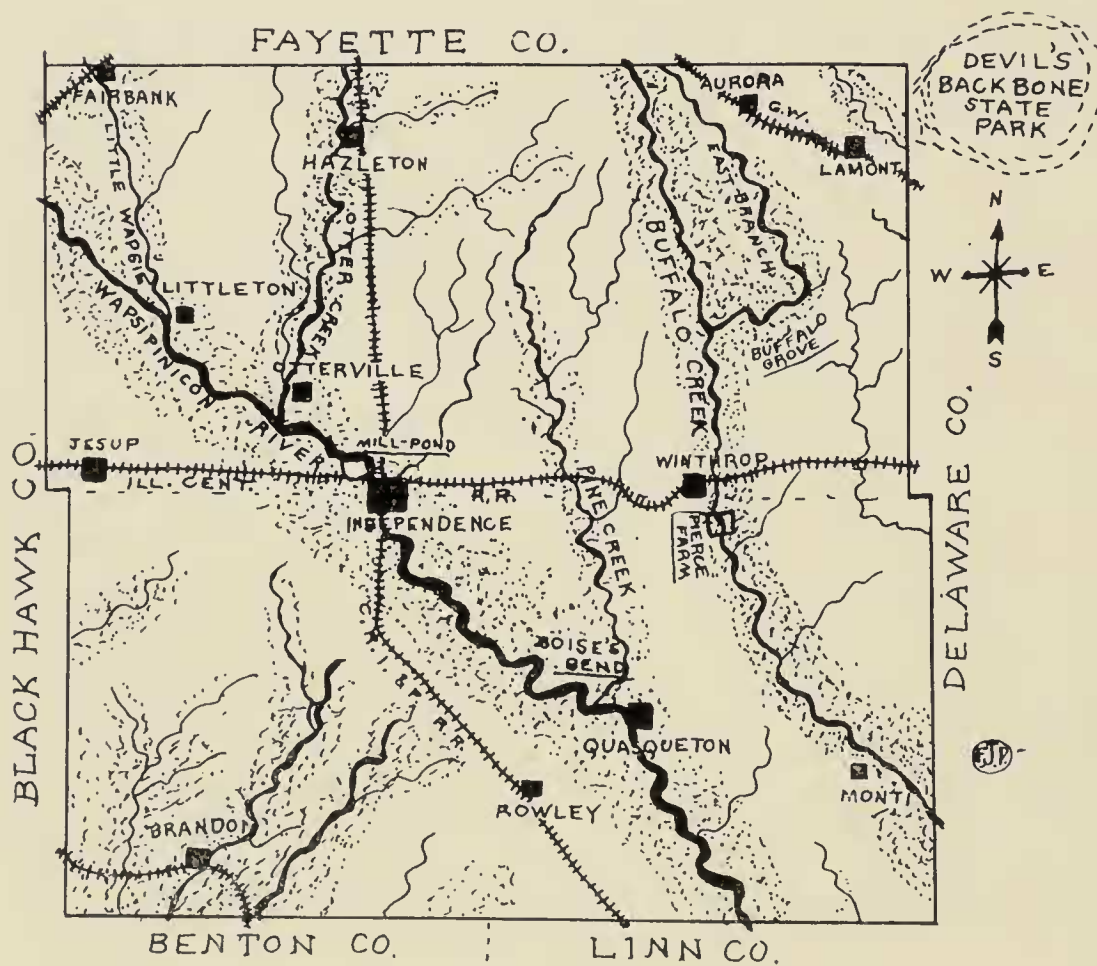
Viewed topographically, Buchanan County is very similar to its adjoining counties in eastern Iowa. It presents little variation and a summary of the general topographic aspects of the neighboring counties includes the features to be found in Buchanan as well. Studied geologically, the surface is almost entirely covered with drift of Iowan age, as left by the glacial ice. The work of erosion is absent except in a few scattered localities, and any variation in topographical features is to be mainly accounted for by the ice forces which molded the surface ages ago. Taken as a whole, Buchanan County is a succession of broad, slightly rolling prairies, drained by a number of streams of varying size, around which virgin woodland is to be found. The drainage is effected principally by the Wapsipinicon River and its branches. This river flows in a general southeast direction from the northwestern to southeastern edge of the county, being joined by the Little Wapsipinicon at Littleton. Buffalo Creek, a typical prairie stream, meanders from north to south through the eastern portion of the county. Its course is parallel to some extent to the Wapsipinicon. There are seven or eight minor streams.

Buchanan County is twenty-four miles square; it is square in shape except for a slight correction jog which divides the county into two nearly equal parts, upper and lower. On the eastern side, Delaware and Dubuque Counties lie between it and the Mississippi River and the State of Illinois, a distance of some sixty miles. On the north Fayette and Winneshiek Counties separate it from Minnesota. Buchanan also touches Black Hawk on the west and Benton and Linn Counties on the south.

Small tracts of natural timber are scattered about the county, but the extensive wooded regions are found only along the water courses. One hundred or more trees are indigenous to the county. All along the Wapsipinicon River the belt of timber was formerly wide and heavy, but the work of the wood-cutter has greatly reduced the acreage of standing timber. The native timber is fast disappearing, a fact that nature lovers note with regret. The oaks and hickories are the principal trees to be found wherever there are woodland tracts of any size. Buffalo Creek, for the greater part of its course, flows through a very narrow belt of woods, consisting chiefly of ash and soft maple, except in the northern and southern parts of the county, where the larger tracts of oak and hickory occur. Wild plum and crabapple thickets are common all over the countryside. Where the timber has been cut

within recent years, hazelbrush invariably grows up in rank profusion, while in places where hazelbrush is less persistent and the land more in the nature of grassy pastures, the hawthorn bush is much in evidence.

The natural features of the county are sufficiently diversified for the attraction of practically all forms of bird-life regularly found in the upper Mississippi Valley, and representatives from all groups of birds that follow the great Mississippi Valley migration route are to be found along the Wapsipinicon and its tributaries at the proper



season. Among the many places favorable for birds within the county, I shall briefly mention a few that have proved particularly good. There is a large tract of timber a mile southeast of the village of Monti, in the southeastern corner of the county. Buffalo Creek flows through the tract, which is an ideal one for bird study at any season of the year. The country about "Boise's Bend", about three miles upriver from Quasqueton, is also very good. Here the Wapsipinicon describes a great bend and flows through a wooded gorge, on whose sides bluffs rise to a height of 100 feet at several points—a region of great interest during the spring migration. Buffalo Grove, a tract of hard-

wood timber six miles north of Winthrop, is another bird haunt that has given me unusual species. The mill-pond at Hazelton I have visited many times. Although the pond is too near the town to attract many water-birds, the heavy woods lying along its western shores constitute very fine warbler territory in spring migration. The Independence mill-pond, an area 200 acres or more in extent, is by far the best territory for water-birds within the county, and most of my work with this group has been done at this place. The dam is in the center of the city, but the mill-pond begins a half mile up the river, outside of the city. The land is quite level here and the river backs up nearly a mile, turning the land into a region of narrow, tree-covered islands, ponds, shallow lakes, and shaded lagoons, surrounded by much marsh land. (See "Bird-Life at an Iowa Mill-Pond", *Bird Lore*, XXXI, 1929, p. 105). Much of my bird work has been conducted at the John M. Pierce farm, which lies on Buffalo Creek three miles south of Winthrop. Although I had little time for concentrated bird study while working on the farm on week-days, the birds were always about me, and I often made unusual and interesting records while going about my regular work. No one has greater opportunity for casual observation of this sort than has the farmer.

The natural enemies of birds in Buchanan County are apparently in minimum numbers. The extensive and long-continued trapping of all fur-bearing mammals by men and boys has almost wiped out skunks, minks, weasels, and other predatory species which must have preyed on bird-life to a serious extent in former years. Reptiles seem to be very scarce also. But man, in his work in many directions, has inadvertently depleted the numbers of many birds. The timber lands are being devastated quite rapidly, ponds and sloughs are drained, while the mowing-machine and grain-binder destroy countless nests and often incubating birds which are on the ground in haying and harvest time. Sloughs and hedges are sometimes burned during nesting time. Two paved highways, having a total length of about fifty miles, cross the county. A major part of the traffic on these roads moves at from forty to sixty miles an hour, and considerable bird-life is destroyed by the fast-moving autos; most of the victims are low-flying birds that inhabit the fields or the more open country.

My bird work in Buchanan County has extended from 1917 to 1930, and the list of birds comprising this paper, the result of my observations during this period, represents my present knowledge of the avifauna of this region. A great deal of time has been spent in the field during these years, in an effort to make the catalogue as com-

plete and representative as possible. In 1921 I published a short list of ninety-eight species seen in 1919, 1920. ("Buchanan County, Iowa, Birds", *The Oologist*, XXXVIII, 1921, pp. 4-7).

In compiling the list I have made use of several sources of information other than my own records. Chief among these are the records of Mrs. Robert I. Bordner, a resident of Buchanan County for many years who made extensive studies of birds during her residence. She has very kindly given me permission to make use of all of her records that do not duplicate my own. Records that are not my own are indicated by the asterisk (*) in the following list.

Although there have been several residents of Buchanan County who have made some study of its bird life, so far as I know there have been no papers on Buchanan County birds published in the bird journals except my own writings, which have appeared during the last decade. A list of my papers relating to this county is given at the end of the present paper.

The following list contains 215 named forms.

HOLBOELL'S GREBE. *Colymbus holboelli*. A rare visitant. I have but one record, April 25, 1926, when one bird was observed at the Independence mill-pond. It was seen in the late afternoon, when the rays of the sun were directly upon it. It was in a small, willow-bordered cove, about twenty-five rods away, and was studied for a long time with 45x telescope on tripod. All markings were distinctly seen—black forehead, crown, and nape; very distinct white throat and rufous neck; grayish back. It was a very large and handsome bird; part of the time it folded its neck back upon its back, swan-like. The bird was with a flock of Blue-winged Teals, Shovellers, Redheads, Canvasbacks, Scaups, and Coots, about forty birds in all. This bird was also observed by Richard Gillespie, Vance Allyn, and Harvey Nichols, all reliable observers. The record was first published in *Bird-Lore*, (XXXI, 1929, p. 106). Holboell's Grebe may occur at the mill-pond quite regularly, but due to its extreme wariness, it is only rarely seen.

HORNED GREBE. *Colymbus auritus*. A scarce visitant. On April 22, 1928, one bird was carefully studied on a lagoon at the Independence mill-pond. Several others were seen at some distance, and one dead bird was found on the shore.

PIED-BILLED GREBE. *Podilymbus podiceps*. A rather common migrant in spring and fall; seen most frequently at Independence mill-pond. Spring dates, from April 6 to May 23; seen in the fall as late as October 17.

LOON. *Gavia immer*. A rare visitant. My only record was made on April 7, 1929, when one bird was seen at the Independence mill-pond. The bird was first seen in the air, but it soon dropped to the water, where it at once dived and reappeared far away, a performance repeated many times. I was astonished to note the speed with which it swam under water, indicated by the points of its reappearance which were so far from the place where it dived. I had become familiar with the Loon on Round Lake, Crow Wing County, Minnesota, in September, 1926, and this bird was satisfactorily studied with 8x glass.

FRANKLIN'S GULL. *Larus franklini*. Rare visitant. I have but one record for this species—April 28, 1919, when two birds were seen at the Pierce farm, southeast of Winthrop. I was plowing that day, and these birds followed me back and forth across the field many times, pausing here and there to pick up food from the freshly turned furrows.

FORSTER'S TERN. *Sterna forsteri*. Fairly regular spring migrant, seen at the Independence mill-pond. It is possible that some of my records may be for *Sterna hirundo*, which is so similar I have not attempted to separate the two in the field. I have referred all records to *Sterna forsteri*, which is apparently the more common species in Iowa. It arrives in the last part of April or first week in May, usually but two or three birds seen on arrival; but I have seen as many as fifteen at one time (May 5, 1929). I have one fall record, August 1, 1926.

BLACK TERN. *Chlidonias nigra surinamensis*. Fairly common spring migrant, seen at the Independence and Hazelton mill-ponds, and often seen proceeding across the open country, where it flies quite low over the newly plowed fields. Arrives in the first half of May, in flocks of from four or five to thirty-five birds. I once saw 200 in one flock. It is quite often seen in the Independence region during the summer, and there is good reason for thinking it may nest there occasionally. Latest fall date, August 21.

DOUBLE-CRESTED CORMORANT. *Phalacrocorax auritus auritus*. Regular spring migrant at the Independence mill-pond, arriving in the last half of April. I have seen it there as early as April 6 and as late as May 23, but most of the birds have departed by early May. My latest fall record is October 16, 1926. The bird is usually seen in small numbers, but on April 25, 1926, a flock of eighty was seen, and on April 24, 1927, a flock was seen which contained from 150 to 175 birds. The last flock was well out on one of the large lakes. The

birds floated quietly in a compact group, and the water was fairly black with them. The formation had the appearance of an island at the distance from which I saw them. On April 13, 1930, I found a flock of about 200 there. On nearly all of my April trips to this mill-pond I have seen the Double-crested Cormorant. The birds are either flapping slowly back and forth over the treetops or are perched in dead trees on the islands. Many stumps and rotting snags stand in the water at different places about the mill-pond. These are favorite perches for the cormorants. The occurrence of this species in Buchanan County has been quite fully described in *Bird-Lore* (XXXI, pp. 105-107).

WHITE PELICAN. *Pelecanus erythrorhynchos*. I have one positive record, that on April 28, 1929, when one bird of this species was seen at the Independence mill-pond. I have several times been fairly certain that I saw the bird, but had to leave it unrecorded because of the distance at which it was observed. The bird seen at Independence did not stop at the mill-pond, though it flew directly over it, going north. It passed over me at a height of 200 feet and was studied carefully with 8x glass in bright sunlight.

RED-BREASTED MERGANSER. *Mergus serrator*. Probably rather common in former years. I have one record—a flock of fifteen birds seen at the Independence mill-pond April 21, 1929.

MALLARD. *Anas platyrhynchos*. Formerly a very abundant migrant and doubtless many bred in the county. It is still a common migrant. Appears early in March and late September. Most of the fall Mallards pass through the county in October. Small flocks often linger until December in sheltered places where there is open water. I saw a flock of five Mallards on a small stream at the Devil's Backbone State Park, Delaware County, on December 23, 1923.

*BLACK DUCK. *Anas rubripes*. Mrs. R. I. Bordner gives me two records: September 25, 1922, a pair on a pond north of Winthrop; April 18, 1926, three at Independence mill-pond.

GREEN-WINGED TEAL. *Nettion carolinense*. A spring and fall migrant that seems to be somewhat scarce at the present time. It is much less common than the Blue-winged Teal. My earliest spring record is April 6.

BLUE-WINGED TEAL. *Querquedula discors*. A common migrant, probably the commonest of the ducks in eastern Iowa. It arrives in early April and is common at the Independence mill-pond until the last of May. I have never found its nest, but I believe the bird nests at the mill-pond. Latest fall date, September 13.

SHOVELLER. *Spatula clypeata*. A migrant appearing in small numbers regularly each year. The most I have seen at one time was a flock of fifteen. Spring dates, March 30 to May 20. Latest fall date, October 6.

PINTAIL. *Dafila acuta tzitzihua*. Formerly common but now scarce. I saw a flock of seventy-five March 21, 1926; a smaller flock of twenty-five was seen on March 30, 1930. I have no fall records.

*WOOD DUCK. *Aix sponsa*. Hunters have found the Wood Duck a rather common migrant in former years, but it is now rare. W. M. Woodward of Independence, says he has seen many of the birds along the Wapsipinicon in past years.

REDHEAD. *Marila americana*. I have one record—three birds seen at the Independence mill-pond on April 25, 1926.

CANVAS-BACK. *Marila valisineria*. Very scarce. Seen only twice in Buchanan County—on April 26, 1925, and April 25, 1926, at Independence mill-pond. A flock of fifteen was seen on the last date.

SCAUP DUCK. *Marila* sp. A common spring migrant at Independence mill-pond, seen in flocks of from ten to forty birds. Spring dates, March 21 to May 13, also one record on June 22. To avoid possible errors I have not tried to separate *Marila marila* and *Marila affinis* in the field.

BUFFLE-HEAD. *Charitonetta albeola*. I have one record—six birds seen at Independence mill-pond April 25, 1926.

SNOW GOOSE. *Chen hyperboreus hyperboreus*. I have one record for this species. A flock of thirty-five (traveling southwest) passed over the Pierce farm on the morning of November 1, 1927. Hunters call this the "White Brant" and report it as being rather common in the county in past years.

CANADA GOOSE. *Branta canadensis canadensis*. Formerly a very abundant migrant, but in recent years it has become quite scarce. Appears in February and October, usually seen or heard migrating over the country, but seldom stopping on its journey to and from the North. On the afternoon of November 16, 1921, I saw a flock of fifty alight on a plowed field near the Pierce farm. There was a great deal of honking for a time, then the flock quieted down and formed a rather compact group. They could be very plainly seen—the big, grayish birds against the black field. After about two hours of rest they went on. The start was made with a great deal of honking and the flock turned toward the north. After proceeding for some distance, a split occurred in their ranks; about a third of their number turned and flew

southwest, while the others went on north. In a short time a flock of geese was seen flying south, and I inferred that this was the same flock hurrying to join their apparently wiser companions. The Canada Goose does considerable traveling at night, so I have missed seeing many of the migrating birds. During mild winters it is not unusual to see flocks of Canada Geese flying north or south at any time. The advance of cold weather sends them south, but a period of mild, thawy weather often brings them back again. I have many winter records for the Canada Goose—December 21, 1917; December 21, 1918; December 16, 1920; December 23, 1921; January 5 and 8, 1922; January 4, 1923; December 23, 1923; December 24, 1927; December 23 and 28, 1928. I had only one record for the Canada Goose in 1929, viz., a flock of thirty on October 28.

*WHISTLING SWAN. *Cygnus columbianus*. One specimen of this bird, shot by an Independence hunter, was brought in to the W. M. Woodward hardware store in that city. Mr. Woodward has had much experience with game birds during the years that he has sold hunters' supplies at his store, and he identified the swan for the hunter. He was unable to tell me the year in which the bird was brought in, but told me it was many years ago, at least ten or twelve years, he thought.

BITTERN. *Botaurus lentiginosus*. A scarce migrant and one that I see only very irregularly. I have a few spring dates, from May 1 to May 23; I have also seen it on June 10. My latest fall record is October 12. It is hard to find because of its very retiring disposition.

LEAST BITTERN. *Ixobrychus exilis*. The Least Bittern is probably found more or less regularly in this county, but owing to its ability to hide itself in the marsh it is only rarely seen. I saw it on May 17 and May 23, 1925, in the marsh at the Independence mill-pond region.

GREAT BLUE HERON. *Ardea herodias herodias*. A regular migrant, appearing early in the spring. Spring dates, from March 24 to May 16. My records do not indicate the beginning of the fall migration, for the bird is seen so often during the summer months there is no way to tell just when this begins. I have seen one or two of the immense birds standing along the shores of our small streams and ponds on many different dates during the summer, beginning as early as June 26 and extending irregularly through July and August through the various years. It appears to become more common after the first of August. I have no proof that it nests within the county, but the presence of the bird through the summer, though very irregular, would seem to indicate this fact. The bird is usually quite solitary, usually only one and sometimes two being seen at one time. On one occasion,

however, I saw a flock of ten along Buffalo Creek (July 28, 1921). Latest fall date, October 24.

GREEN HERON. *Butorides virescens virescens*. Rather common summer resident, nesting along small streams, in plum thickets, and small groves. Several pairs of Green Herons nested in a willow grove on the Pierce farm for many years, then deserted the place. Tree squirrels were quite numerous in the grove, and I blamed them for the disappearance of the herons, whose nests they doubtless robbed. Arrives last week of April or first week in May and remains until the last of September. Latest fall record, October 5.

BLACK-CROWNED NIGHT HERON. *Nycticorax nycticorax naevius*. Formerly a rather common summer resident, but now very scarce. The depredations of Crows at the herons' nests are doubtless responsible for their decline in numbers. The loud *quark* of the night herons used to be a common sound over Buffalo Creek in the warm summer evenings, but it is no longer. Spring arrival dates, from April 10 to May 12; latest fall date, October 10. On one occasion I saw a night heron that arrived too early in the spring and got caught in an unseasonable blizzard on April 16, 1921. I found the bird perched on a limb of a tamarack tree, his plumage heavy with the wet snow that covered the trees and ground with a white blanket—a summer bird in winter surroundings. (See WILSON BULLETIN, XXXIV, 1922, pp. 186-187).

*SANDHILL CRANE. *Grus mexicana*. Formerly a common bird in the county, but never seen at the present time. Will Griswold tells me of seeing Sandhill Cranes many years ago when he was a boy on the home farm near Winthrop. They were then rather common in the spring, and he would see the immense birds standing together on the knolls and sandy hills near his home. The following note is taken from "History of Buchanan County, Iowa, and Its People", by Harry C. and Katharyn J. Chappell, 1914 (Vol. 1, p. 35): "An old settler told us about the Sandhill Cranes that used to visit this county every fall in their migratory flights south for the winter. They would come in small flocks and in their particular haunts, the sand hills, from which they derived their name, and perform the most peculiar and interesting dance, forming a sort of circle, then balancing back and forth alamand left and circling right, resembling the figures of a cotillion, flapping their wings and seeming to thoroughly enjoy the terpsichorean art quite as much as humans." This mating dance is performed in the spring, not in the fall—a slip in the narrative of the old settler, no doubt.

*KING RAIL. *Rallus elegans*. Mrs. R. I. Bordner gives me the following records: June 8, 1918; April 22, 23, 24, and 30, 1924. One bird was seen each time and all were seen in the same location, a marshy roadside north of Lamont.

VIRGINIA RAIL. *Rallus virginianus*. I have a number of records made at Independence mill-pond (one bird seen each time): May 23, 1926; August 21, 1927; May 13, 1928 (dead bird found inside the rails of Rock Island tracks); May 12, 1929 (this bird I found along a small stream near a culvert. It was three feet from me and suddenly darted out of sight. I looked closely and found it hiding in some grass beside the culvert. It seemed very tame and it was almost like holding the bird in my hand).

SORA. *Porzana carolina*. Common migrant in most years, but I am unable to find it some years. Spring dates, May 5 to May 23. I have seen as many as a dozen at the Independence mill-pond in one day, but it is hard to find them, as a rule, for they are expert in hiding in the marsh. I have a mounted specimen of a Sora that I picked up in a ditch beside a paved highway near Winthrop on May 12, 1929. Its skull had been broken between the eyes, which suggested that it had struck the telephone wires beside the road.

*YELLOW RAIL. *Coturnicops noveboracensis*. One was flushed from the marsh grass at Independence mill-pond by Vance Allyn on May 16, 1926. He viewed the bird at a distance of only a few feet and was entirely certain of the identification. I was walking a few rods behind him and missed seeing the bird. We searched in the marsh at that point, but it could not be found again.

FLORIDA GALLINULE. *Gallinula chloropus cachinnans*. Rare. My only record is one bird that I found along a tiny stream on the Pierce farm on May 2, 1919.

COOT. *Fulica americana*. A common migrant and probably a summer resident at Independence mill-pond. It is always very common in the spring at this mill-pond and is present in flocks varying from a dozen to a hundred birds. Arrives last week in March or first week in April. Latest fall date, October 17.

WILSON'S PHALAROPE. *Steganopus tricolor*. I have one record, a pair seen on a small pond at the Independence region on May 2, 1926.

*BLACK-NECKED STILT. *Himantopus mexicanus*. "Last spring (1924) north of Lamont there were ponds in fields that had held no water for years, and we haunted that vicinity. . . . The ponds lasted all summer owing to the many rains we had, and in August we found a

pair of Black-necked Stilts. You may be sure we were again daily visitors and on August 31 we visited the pond three different times during the day to observe the stilts. They were unafraid, allowing us to approach very near. Nearly every day (September 5, 6, 7, and 8, 1924) we returned to this pond on the outskirts of Lamont where there were also flocks of Yellow-legs, four Blue-winged Teals, and one Green-winged Teal in addition to the stilts. September 12 the water was gone and also the birds. This was very interesting to me, for I had never before seen a stilt, and to observe them so closely was indeed a pleasure."—Mrs. R. I. Bordner in a letter to me dated February 17, 1925.

WOODCOCK. *Rubicola minor*. Rare visitant. I have only one record—one seen along Buffalo Creek on November 5, 1922.

WILSON'S SNIPE. *Gallinago delicata*. Fairly common migrant. Spring dates, March 28 to May 16; fall dates, August 8 to November 1. This bird can usually be found along ponds and in marshes at the proper season.

PECTORAL SANDPIPER. *Pisobia maculata*. A spring migrant usually found in small numbers. My earliest spring record is March 25 and the latest is May 18. In the fall I have seen it from July 31 to September 4, but I have only a few fall records and these are scattered through many years. I find them in small flocks of less than a dozen, as a rule, although I have found as many as 300 in a flock (this was at Independence mill-pond, April 26 and 27, 1930). They are usually found in sloughs or boggy meadows, feeding in the grass with only head and neck visible. Suddenly they will start up and fly erratically away, the whole flock often wheeling in the air as one bird. One day while I was at the Independence mill-pond I was watching a flock of Pectoral Sandpipers flying overhead at great speed. They wheeled in the air and flew very near to the telegraph wires on the railway right-of-way. As the flock swept by one of the birds struck a wire and dropped to the ground below. The bird's wing was hopelessly broken, almost completely severed from its body, so I killed it at once.

LEAST SANDPIPER. *Pisobia minutilla*. Fairly regular migrant, but not very common. It appears in May and is seen again after the middle of August. Latest fall record, September 7.

RED-BACKED SANDPIPER. *Pelidna alpina sakhalina*. Rare migrant. My only record was made on May 26, 1927. On this date four were seen on the shores of a small pond in a plowed field on the Pierce farm. The birds were studied at a distance of only twenty feet. They

were very tame, taking wing only when I came too near or moved suddenly.

*SEMIPALMATED SANDPIPER. *Ereunetes pusillus*. Mrs. Bordner gives me one record: May 13, 1917, several seen on the Wapsipinicon River near Independence.

GREATER YELLOW-LEGS. *Totanus melanoleucus*. Fairly regular migrant, appearing in April and remaining often until the middle of May. Seen in flocks of a few birds and up to as many as twenty-five, and is often with *Totanus flavipes*. My first fall record is July 31; I have August dates, but none to indicate when it leaves in the fall.

YELLOW-LEGS. *Totanus flavipes*. Fairly regular migrant, usually seen in larger numbers than the last species. My earliest spring date is April 10; earliest fall date, July 31, and latest, August 22. On July 31, 1926, I saw a flock of over 500 Yellow-legs on the wet ground bordering Buffalo Creek on the Pierce farm. I heard a very loud chorus of their whistles early in the morning before arising; I went out and found the largest flock of Yellow-legs that I have ever seen. That year we had an unusually wet summer and fall, and all the low pastures lying along the creek were flooded. In these pastures the Yellow-legs were holding high carnival.

SOLITARY SANDPIPER. *Tringa solitaria solitaria*. Fairly common migrant. It is seen regularly, but seldom are more than two or three seen at a time. Spring records, April 25 to May 20. It appears again in late July (23d to 27th) and is usually seen until the first week in October.

WESTERN WILLET. *Catoptrophorus semipalmatus inornatus*. I have one record. One was seen at the Independence mill-pond on May 5, 1929. It was feeding with a flock of about 50 Yellow-legs of both species along the shores of one of the ponds. The plumage of this bird was very light gray, almost white, in fact.

UPLAND PLOVER. *Bartramia longicauda*. A fairly common summer resident, appearing in April. Its habitat is the meadowland, the region of large sloughs and meadows that fill many of the valleys in the rolling prairies of the county. The Upland Plover seems to be more common in the spring, when it is fond of sailing high in the sky and uttering its melodious whistle.

SPOTTED SANDPIPER. *Actitis macularia*. Summer resident, usually fairly common. It arrives in May and remains until the middle of September. The Spotted Sandpiper is a familiar figure along the streams of the county during the summer months.

BLACK-BELLIED PLOVER. *Squatarola squatarola cynosurae*. My only record was made May 20, 1927, when four of the birds were seen on the shores of a small pond in a plowed field of the Pierce farm. They were studied at considerable length with 8x glass. This appearance of the birds has been completely described by me in a note in *Bird-Lore* (1927, pp. 416-417).

KILLDEER. *Oxyechus vociferus*. Very common summer resident. It arrives very regularly about March 10 and remains until the last of October or the first week of November, depending on the weather. My earliest spring record is February 21, 1930, and my latest fall record is November 19, 1928. The bird is often caught in snowstorms; it flies about, calling cheerfully, even though the ground be covered with snow. It nests commonly in cornfields, placing its nest between the corn-rows or beside a hill of corn in the month of June. When the nest is approached by the farmer with his team and corn-plow, the sitting bird either tries to intimidate the horses or attempts to lead the farmer away with the crippled wing ruse. In the fall Killdeers are seen along small streams in flocks of from twenty to forty birds.

SEMIPALMATED PLOVER. *Charadrius semipalmatus*. I have only a few records for the bird in Buchanan County: May 20, 1927 (one); May 26, 1927 (two); July 31, 1927 (one). I have two records for Black Hawk, the adjoining county, (May 14 and August 21, 1925).

BOB-WHITE. *Colinus virginianus virginianus*. A permanent resident that was once very common but is now barely able to hold its own in numbers. It has been protected since 1917 and is to remain on the list of protected birds for an indefinite period. The severe winters that we quite often have seem to be very hard on these birds. Many of them starve when unable to find sufficient food when there is much snow and cold weather, while others, in a weakened condition, fall easy victims to enemies. Unprincipled hunters frequently shoot them, and there are plenty of stories that the introduced Ring-neck Pheasant is driving them from their accustomed haunts; it is said, and doubtless with truth, that this new aggressor both destroys the Bob-white's nest and kills any of the birds caught unawares. The Bob-white usually winters in sheltered hedges near corn-fields. Here it picks up shelled corn in the fall and eats such weed seeds as it can find along the borders of the field. In very severe weather I have seen a small flock come into the feeding yards on the farm, where they eat with the farm animals and poultry in the manner of domestic birds. Many farmers appreciate the value of Bob-white and like to have the

bird come about the farm buildings. They scatter grain for him and thus provide food when his need for it is greatest. On the Pierce farm there was usually a small flock of Bob-whites that wintered each year.

RUFFED GROUSE. *Bonasa umbellus umbellus*. Rare permanent resident. I saw one bird in the heavy woods southeast of Monti on May 6, 1923, but that is my only record for this county. On December 23, 1923, while taking a Christmas census in the Devil's Backbone State Park, Delaware County (about four miles from the Buchanan County line), I found one Ruffed Grouse, but it is rare there also.

PRAIRIE CHICKEN. *Tympanuchus americanus americanus*. Formerly an abundant permanent resident, but now rare. In past years I would hear it "booming" in the wide region of sloughs that lie a mile or two to the east of the Pierce farm, but at the present time this is a spring sound not often heard. The past abundance of the Prairie Chicken and the history of the hunting and trapping of the bird in this county have been completely described in a paper published in the WILSON BULLETIN. (See "The Prairie Chicken in East Central Iowa", WILSON BULLETIN. XXXIV, pp. 100-106). In concluding this paper I said: "Covies of from ten to fifty of the birds are common in many regions. Frequent mention of their increase is found in the local presses. Where formerly we found none, we now see them rather regularly, and if present indications are at all prophetic, we shall have large numbers of them with us in the future." My prediction did not bear fruit, and time has shown that this was only a temporary increase that could be noted at the time my paper was written. The Prairie Chicken is protected by law (the protection began in 1917), but no permanent increase in its numbers has resulted. As in the case of the Bob-white, the Ring-necked Pheasant is blamed for the decrease in the numbers of the Prairie Chicken. In February, 1930, I found a flock of fifty-five Prairie Chickens a mile north of Winthrop. It had been a number of years since I had seen a flock of even fair size, and this large flock was a pleasant surprise. I usually see only one or two birds during the year.

RING-NECKED PHEASANT. *Phasianus colchicus torquatus*. A permanent resident that is increasing quite rapidly in eastern Iowa and promises to become a very plentiful game bird. I do not know when the pheasant first appeared in the county. I first saw it in 1924, but I know it had been here several years before this. Only a few were seen at first, but now rather large flocks are often reported (a dozen to twenty birds). Farmers say the pheasants come into the cattle

feeding yards and eat corn in the winter, then roost in nearby trees at night like a flock of chickens. There is considerable complaint from farmers in this county about the pheasants eating newly planted corn.

*WILD TURKEY. *Meleagris gallopavo silvestris*. "Wild Turkeys were in great abundance and were seen in flocks of as many as a hundred, but they have entirely disappeared."—"History of Buchanan County, Iowa, and Its People", by Harry C. and Katharyn J. Chappell, Vol. 1, p. 35.

*PASSENGER PIGEON. *Ectopistes migratorius*. "Early settlers tell of enormous flocks of wild pigeons that for several years visited this county and then for some strange unaccountable reason failed to return and have never revisited these haunts since and never could be traced. . . . In June, 1858, the sportsmen of Independence were having rare sport shooting them, thousands having congregated in the fields about town, the Cobb pasture just west of Independence being literally alive with them."—"History of Buchanan County, Iowa, and Its People", Vol. 1, p. 35.

MOURNING DOVE. *Zenaidura macroura carolinensis*. Very common summer resident, arriving in the last week of March or the first week in April and remaining until the last of October. I have one record of it on November 15. The Mourning Dove often nests late in the season; I have found it nesting early in September. On two occasions it has wintered on the Pierce farm. A pair remained through the entire winter of 1920-21 around a corn-fodder stack and in a willow grove back of the farm buildings. Another dove stayed around the feeding yards through December, 1928, or until the 23d of that month, which was the last date on which it was seen.

*SWALLOW-TAILED KITE. *Elanoides forficatus*. "The last recorded observation of this bird in Iowa was made by Mr. J. H. Scott, of Iowa City, on Wapsipinicon River near Independence in August, 1912."—"The Raptorial Birds of Iowa", by Bert Heald Bailey (1918), p. 53.

MARSH HAWK. *Circus hudsonius*. A fairly common summer resident, but rare in winter. I have a number of winter records for the Marsh Hawk, but it is not often seen until March or early April.

SHARP-SHINNED HAWK. *Accipiter velox*. A fairly common migrant, appearing in the latter part of April. Latest fall record, October 11. This bird nested in the woods along Buffalo Creek on Pierce farm in June, 1920. The nest, a bulky affair of coarse sticks, was in the top of an ash tree, about twenty feet from the ground.

COOPER'S HAWK. *Accipiter cooperi*. A summer resident, but not common at any time.

RED-TAILED HAWK. *Buteo borealis borealis*. A permanent resident, not common at any season.

RED-SHOULDERED HAWK. *Buteo lineatus lineatus*. There are three records for the species in this county: One bird seen by Mrs. Bordner at Independence on September 15, 1918; one seen by Chas. J. Spiker on Quasqueton-Independence road August 14, 1926; and one seen by me at the Independence mill-pond March 9, 1930.

SWAINSON'S HAWK. *Buteo swainsoni*. Fairly common as a migrant. My earliest spring record is April 17. I have numerous summer records for the bird, which indicate that it must nest in this region.

BROAD-WINGED HAWK. *Buteo platypterus*. Seen only as an irregular migrant. On December 23, 1923, while taking a Christmas census with Chas. J. Spiker in Devil's Backbone State Park (in Delaware County near Buchanan), a Broad-winged Hawk was found. This is my only winter record.

ROUGH-LEGGED HAWK. *Archibuteo lagopus sancti-johannis*. Irregular winter visitant, for which I have made the following records: December 23, 1920 (one); January 24, 1926 (two); December 10, 1929 (one); December 23, 1929 (three). It has been seen on other occasions, but I have no records available.

FERRUGINOUS ROUGH-LEGGED HAWK. *Archibuteo ferrugineus*. Rare visitant. I saw one bird of this species on the Pierce farm on March 17 and 19, 1926. I saw another in an open field near Hazelton, April 13, 1930.

GOLDEN EAGLE. *Aquila chrysaetos*. Very rare visitant. An adult specimen of the Golden Eagle was found in a slough southwest of Lamont in the fall of 1922. It was shot and mounted by a son of Mr. Joe Foffel, of Lamont. The mounted specimen is in the possession of this man, and I examined it on May 19, 1928. The legs of the bird were feathered all the way down to the toes, eliminating any question that it might have been an immature Bald Eagle.

BALD EAGLE. *Haliaeetus leucocephalus leucocephalus*. A rare visitant. My records of the species in Buchanan County are: May 6, 1919 (one, four miles west of Winthrop); September 12, 1920 (two, a mile south of Pierce farm); September 15, 1920 (one, on Pierce farm); May 18, 1924 (one, at Hazelton mill-pond). Mrs. Bordner saw one near Lamont September 22, 1926. It was later shot by a farmer and given to Mr. Bordner who had it mounted.

PIGEON HAWK. *Falco columbarius columbarius*. This bird doubtless appears in the county rather regularly, but I have made only two records. I saw one on November 24, 1926, and another May 13, 1928. Mrs. Bordner records one on October 14, 1922, and another on April 1, 1923.

SPARROW HAWK. *Cerchneis sparveria sparveria*. Fairly common migrant and a summer resident in small numbers. Arrives in the last of March or first of April. I have one winter record; I saw one flying across the pavement four miles west of Winthrop on January 18, 1929. My earliest spring record is March 4.

OSPREY. *Pandion haliaetus carolinensis*. A rather rare migrant. My records for the county are as follows (one bird seen on each date): April 17, 1927; May 1, 1927; May 3, 1927; May 3, 1928; April 28, 1929; April 13, 21, and 26, 1930.¹

BARN OWL. *Tyto alba pratincola*. A rare visitant. One bird appeared at Pierce farm April 13, 1922, and stayed in the silo all that day. I saw another at a barn in Winthrop August 23, 1929. This owl had been noted by the renter of the barn for a week or more previous to this and it seemed to be making its home there. Soon after this it disappeared and did not return so far as I know.

*LONG-EARED OWL. *Asio wilsonianus*. Very rare resident, one that I have never been able to find within the county, although I have been on the lookout for it ever since I began the study of the birds of Buchanan County. Mrs. R. I. Bordner has been more fortunate than I in seeing the bird. She writes to me under date of December 3, 1926:

"I first found it nesting April 7, 1919, in the cemetery for insane at Independence. It is located south of the Hospital and filled with evergreen trees. Some girls had told me of seeing the Great Horned Owl at that place and suggested we go there; we were fortunate in seeing both owls. The Long-eared was on the nest, and when we tapped on the tree would pop his head over the edge and gaze at us, a most weird spectacle. We went back several days later to show some of the members of our family and repeated the performance, much to their amusement.

¹In the spring of 1930 I saw the Osprey at the Independence mill-pond on the three dates given above. Although a pair of the birds had been reported there, I saw but one on each occasion. An Independence man shot one of the birds on April 24. As my next record was made on April 26, there was no doubt of there having been two Ospreys at the mill-pond. The dead bird, which proved to be a male, was turned over to me and I had it mounted.

"In 1923, November 17, I was at Independence a few days, and went for a tramp along a little creek on the east edge of town—a place that had been a favorite bird haunt of mine, and by the way the place where I saw the Evening Grosbeaks. It was a gray day, and suddenly before me, on a level with my eyes, was the familiar cat-face of the Long-eared Owl."

SHORT-EARED OWL. *Asio flammeus*. A regular winter resident, which can be found frequenting sloughs and meadowland during the winter. It is occasionally found in small flocks, but it is not common to see more than one or two in one place. My earliest fall record is November 20. I have two very late spring records—May 13, 1924, and May 24, 1925.

BARRED OWL. *Strix varia varia*. Permanent resident in heavy timber. The Barred Owl may be almost as common as the Great Horned Owl, but since it is so retiring by day and does not fly from its retreat unless one comes very near, it is not often seen. I usually see it once or twice each year, but some years I have missed it entirely. When one is along the Wapsipinicon River before sunrise the bird is often heard hooting. The notes are much louder than those of the Great Horned Owl and carry a considerable distance if the air is still.

SCREECH OWL. *Otus asio asio*. Fairly common permanent resident, but owing to its nocturnal habits is not often seen. Its notes, however, are quite often heard and tell of the presence of the bird. A pair of Screech Owls used to nest in a grove of tamaracks and willows on the Pierce farm, and I would often find a row of four or five of their young sitting on a limb among the trees.

GREAT HORNED OWL. *Bubo virginianus virginianus*. Fairly common permanent resident in regions of heavy timber and often found outside of this habitat. One can seldom go into the heavy timber anywhere in the county without hearing a flock of Crows annoying a Great Horned Owl. Often a pair will be found sitting in the same tree, after the Crows have disclosed their presence. A pair nested on or near the Pierce farm for five or six years or longer, but they were both shot by a farmer's boy who happened to find them in 1929. I described their nesting of one season in *Bird-Lore*, XXVI, 1924, pp. 94-96.

SNOWY OWL. *Nyctea nyctea*. Very rare winter visitant. My only record is for one shot by a farmer near Lamont November 28, 1926. I saw the dead bird.

YELLOW-BILLED CUCKOO. *Coccyzus americanus americanus*. Common summer resident, arriving in May. This bird is the farmer's "Rain Crow".

BLACK-BILLED CUCKOO. *Coccyzus erythrophthalmus*. Summer resident, but much less common than the last.

BELTED KINGFISHER. *Ceryle alcyon alcyon*. Common summer resident. Occasionally winters along open streams. There are few open streams, however, except those fed by springs or having swift water; in mild winters there is considerable open water, but we do not often have mild winters. One kingfisher stayed through the entire winter of 1920-21, along Buffalo Creek on the Pierce farm. One was found along a small stream in Devil's Backbone State Park on December 23, 1923. I found another along the creek at Buffalo Grove January 3, 1929. My earliest spring date is March 16.

HAIRY WOODPECKER. *Dryobates villosus villosus*. Fairly common permanent resident.

DOWNY WOODPECKER. *Dryobates pubescens medianus*. Common permanent resident.

YELLOW-BELLIED SAPSUCKER. *Sphyrapicus varius varius*. A common migrant, appearing early in April and again in late September. Latest fall date, October 12.

RED-HEADED WOODPECKER. *Melanerpes erthrocephalus*. Formerly an abundant summer resident, but now becoming scarce. Many red-heads are killed by automobiles along almost every mile of paved highway. This has been occurring for a number of years and now we notice that the bird is becoming scarce, a circumstance that the automobile has no doubt brought about. The red-head frequently winters in the heavy timber of the county and I have many winter records. My earliest spring record is March 28, but most of the birds come in early May and remain until September.

RED-BELLIED WOODPECKER. *Centurus carolinus*. Permanent resident in heavily timbered regions and sometimes seen outside of this habitat. It can hardly be called a common bird, but it is nearly always to be found in the heavy woods, though in small numbers.

NORTHERN FLICKER. *Colaptes auratus luteus*. An abundant summer resident. It arrives in March and remains until September. Occasionally it winters. I have a few winter records scattered through the years.

WHIP-POOR-WILL. *Antrostomus vociferus vociferus*. A rather scarce summer resident in the woods along the Wapsipinicon, arriving

the last of April or early in May. I often find the bird when tramping through the woods in May and have often heard it calling at night along the river. I once heard two birds along Buffalo Creek, but their presence there is unusual.

NIGHTHAWK. *Chordeiles virginianus virginianus*. A scarce summer resident, arriving about the middle of May and remaining until late September. It is often very common during the fall migration, which begins in late August. During this period flocks containing hundreds are often seen. These flocks are usually strung out across the sky and take many minutes in passing.

CHIMNEY SWIFT. *Chaetura pelagica*. A common summer resident, arriving the last week in April or the first week in May and remaining until September. My latest fall record is September 19.

RUBY-THROATED HUMMINGBIRD. *Archilochus colubris*. A scarce summer resident, arriving in the last half of May and remaining until the middle of September.

KINGBIRD. *Tyrannus tyrannus*. A fairly common summer resident in most parts of the county. It arrives the last week of April or the first week of May and remains until the first week of September.

ARKANSAS KINGBIRD. *Tyrannus verticalis*. Rare visitant. The only one I have seen was found along a roadside near Buffalo Creek on May 15, 1927. This bird perched on a wire fence and was studied at a distance of fifteen feet. It flew off into a plowed field several times, catching insects, but returned each time to the wire near me. Mrs. Bordner has seen the bird three times in the county: on June 2, 1918, she saw one north of Independence; on May 21, 1921, she saw one near Lamont, and on June 4, 1922, another near Lamont.

CRESTED FLYCATCHER. *Myiarchus crinitus*. Fairly common summer resident, arriving in the early part of May and remaining until September.

PHOEBE. *Sayornis phoebe*. Formerly a common summer resident, but in recent years, when old-fashioned wooden bridges have been rapidly replaced by concrete structures, the numbers of the bird are diminishing in proportion. The species seems to have found no substitute for the wooden bridge nesting place. It arrives regularly from the 21st to the 27th of March and often remains as late as October 12.

OLIVE-SIDED FLYCATCHER. *Nuttallornis borealis*. A rather rare migrant. I saw one along Buffalo Creek on September 3, 1925. Mrs. Bordner found one August 25, 1918, and another on August 31, 1924, both records in Buchanan County.

WOOD PEWEE. *Myiochanes virens*. A common summer resident in the woodlands of the county from the middle of May until September. September 14 is my latest fall record.

YELLOW-BELLIED FLYCATCHER. *Empidonax flaviventris*. I have one positive record. One bird of this species was seen in the Monti woods on June 13, 1928. It was pointed out to me and identified by Chas. J. Spiker.

TRAILL'S FLYCATCHER. *Empidonax traillii traillii*. A fairly common migrant appearing in the second and third weeks of May.

LEAST FLYCATCHER. *Empidonax minimus*. The little Chebec is a fairly regular migrant and is usually rather common in its migrations during May.

PRAIRIE HORNED LARK. *Otocoris alpestris praticola*. Permanent resident. Much less common during the winter months. I always think of the Prairie Horned Lark as a spring bird, for it is more or less migratory and early in February it appears in flocks, some of which are quite large. It is then, too, that the bird begins its singing, which is done while it mounts high into the sky. This habit is continued through the spring months and I have hundreds of times watched the bird give its aerial demonstrations. After the performance the lark closes its wings and from a great height drops to the earth like a stone, opening its wings when the descent is almost finished and alighting gracefully on the ground or on a convenient perch.

BLUE JAY. *Cyanocitta cristata cristata*. A permanent resident that is abundant during the spring and summer and is fairly common in the wooded regions during the winter. The species is migratory to a considerable extent and becomes very common during the spring migration. In late September large flocks are sometimes seen proceeding southward. I have seen as many as 200 in such a flock.

CROW. *Corvus brachyrhynchos brachyrhynchos*. Common permanent resident. Crows are quite gregarious and flocks of some size are frequently seen. The largest flock I have ever seen contained about 300; the birds were assembled in a cornfield (December 23, 1920). I know of no large Crow "roosts" within the county. Crows nest commonly wherever there are groves or tracts of natural woodland of fair size.

BOBOLINK. *Dolichonyx oryzivorus*. Common summer resident, arriving the first week in May and remaining until September. Latest fall date, September 17.

COWBIRD. *Molothrus ater ater*. Very common summer resident, arriving early in April. My latest fall record is September 3.

YELLOW-HEADED BLACKBIRD. *Xanthocephalus xanthocephalus*. This species formerly nested at the Independence mill-pond and doubtless a few pairs still do, but at present the bird does not appear in very large numbers, usually small flocks of from a half dozen to fifteen being the extent of the number seen. These I find each year at the Independence mill-pond during the month of May. On one occasion I saw one near Buffalo Creek on the Pierce farm. There are large areas of marsh land and reedy ponds at Independence, so of course this is where the yellow-head is always found.

RED-WINGED BLACKBIRD. *Agelaius phoeniceus phoeniceus*. Common summer resident wherever there is suitable nesting ground for the bird. It appears about the second week of March and is often seen as late as November. On January 12, 1928, I saw a flock of fourteen. The appearance of the birds at that time was, of course, very unusual, but it was during a spell of warm, spring-like weather, a typical "January thaw", and this was doubtless responsible for their venturing north. The red-wing nests in the marsh, as a rule, but I have found its nest in an oatfield. One nest, which was woven into the oat-stalks, contained young at the time of harvesting the crop. The oat-binder nipped off the stalks supporting the nest and the young birds narrowly escaped destruction.

MEADOWLARK. *Sturnella magna magna*. Abundant summer resident, arriving regularly about March 12 and remaining until early October. Wintering Meadowlarks are occasionally reported, but I have only one winter record for the bird. I saw one December 4, 1929.

WESTERN MEADOWLARK. *Sturnella neglecta*. Common summer resident, arriving at about the same time as the eastern form.

ORCHARD ORIOLE. *Icterus spurius*. Anderson, in his "Birds of Iowa", says the Orchard Oriole is a "common summer resident in all parts of Iowa." I have found the bird to be rare in Buchanan County. During the period of my bird study in the county, I have had only these few records (one bird seen in each case): June 13, 1917; June 10, 1918; May 17, 1924.

BALTIMORE ORIOLE. *Icterus galbula*. Common summer resident, arriving about the second week of May and remaining until the first week of September.

RUSTY BLACKBIRD. *Euphagus carolinus*. An abundant migrant, arriving early in March and remaining common until April in the spring migration; in the fall is usually common until late November, although the bulk of the birds have passed before that. A straggler is occasionally seen in the winter.

BRONZED GRACKLE. *Quiscalus quiscula aeneus*. An abundant migrant and summer resident. It assembles in flocks of thousands in August before migrating and arrives in large flocks as well. It is common from early March until the last of October, and a straggler or two may occasionally be found in the winter.

*EVENING GROSBEAK. *Hesperiphona vespertina vespertina*. Rare visitant. Mrs. Bordner saw two along a small brook at the eastern edge of Independence on February 16, 1919.

PURPLE FINCH. *Carpodacus purpureus purpureus*. A regular migrant in spring and fall, but rare during winter. It arrives in April, leaves in May, and returns in late September and during October. I have two winter records: A flock of ten seen December 23, 1923, in Devil's Backbone State Park, Delaware County, and a flock of ten seen January 31, 1924, in Buchanan County.

CROSSBILL. *Loxia curvirostra minor*. A rare visitant. The bird has visited the county only once to my knowledge. During April, 1923, there was a large incursion of the Crossbill into the county, and it was reported as rather common in many places, including the city of Independence. The birds that I saw were on the Pierce farm. A flock of about twenty-five stayed in our tamarack grove from April 4 to April 22, 1923. A small flock of Redpolls were also in the grove at about this time. This occurrence of the Crossbills and Redpolls has been quite fully described in the WILSON BULLETIN, XXXV, 1923, pp. 157-159.

REDPOLL. *Acanthis linaria linaria*. Rare visitant. A flock of ten visited the tamarack grove on the Pierce farm between March 16 and April 10, 1923. On some days only two or three birds could be found there, but the entire flock was often present. See note on Redpolls under last species.

GOLDFINCH. *Astragalinus tristis tristis*. Permanent resident, abundant in spring and summer, but rather scarce during the winter. Goldfinches are usually seen in small flocks. They gather in some tree in the spring months and give concerts which are very pleasing to the listener.

PINE SISKIN. *Spinus pinus*. Scarce winter visitant. I saw one in Devil's Backbone State Park, Delaware County, December 23, 1923. A flock of seven stayed in the heavy shelter-belt of pine, birch, and spruce at the northern edge of the State Hospital grounds at Independence during December, 1929 (I saw them on the 17th and 23d of the month), and as they appeared there at different times during

January and February, 1930, it seems probable that they spent most of the winter at that place.

SNOW BUNTING. *Plectrophenax nivalis nivalis*. Rare winter visitant. A flock of about 200 appeared near Winthrop and remained a week or more during January, 1927. During the latter part of January, 1930, flocks totaling at least 200 appeared. I saw them along the road between Independence and Waterloo.

LAPLAND LONGSPUR. *Calcarius lapponicus lapponicus*. A rather scarce winter resident, but always very common in the fall. Beginning in early November it appears in flocks containing hundreds, even thousands, of longspurs, which move restlessly about the country. By December these flocks seem to have disappeared and only a few birds will be seen or heard during winter.

ENGLISH SPARROW. *Passer domesticus domesticus*. Abundant permanent resident in towns and at every group of farm buildings. It seldom nests in the open country and is nearly always found about buildings of some sort.

VESPER SPARROW. *Pooecetes gramineus gramineus*. Common summer resident, arriving the first or second week of April and remaining until October. My earliest spring record is March 20, and my latest fall record is November 25.

SAVANNAH SPARROW. *Passerculus sandwichensis savanna*. A scarce migrant, one that I have seen but a few times. Very careful search for it would doubtless reveal many individuals during migrations, but lack of time has often prevented my making a lengthy search at the proper season.

GRASSHOPPER SPARROW. *Ammodramus savannarum australis*. A fairly common summer resident, arriving in the latter part of April or early May.

LECONTE'S SPARROW. *Passerherbulus lecontei*. This species may be fairly common in migration, but owing to its habit of hiding in grass and high weeds in sloughs and meadows I can only rarely find it. I have never seen it in the spring. My latest fall record is October 21.

LARK SPARROW. *Chondestes grammacus grammacus*. Along the Cedar River near Waterloo in Black Hawk County, the Lark Sparrow is fairly common and seems to be a summer resident, but I see it very irregularly in Buchanan County and then only as a spring migrant.

HARRIS'S SPARROW. *Zonotrichia querula*. A fairly regular migrant in spring and fall. There have been only a few years that I did not find it at all. It appears in May and October.

WHITE-CROWNED SPARROW. *Zonotrichia leucophrys leucophrys*. Very scarce migrant. I have only a few records, all of these during the month of May.

WHITE-THROATED SPARROW. *Zonotrichia albicollis*. Common spring and fall migrant, appearing from the first week of April to the end of the month and remaining until the middle of May in some years. In the fall migration I have noted it from September 27 to October 19.

TREE SPARROW. *Spizella monticola monticola*. Common winter resident, from the last of October and early November until April. Latest spring date, April 25.

CHIPPING SPARROW. *Spizella passerina passerina*. Scarce summer resident. It arrives from April 7 to April 22.

FIELD SPARROW. *Spizella pusilla pusilla*. Common summer resident in regions where the timber has been cut off and the land has grown up to hazel-brush and hawthorn bushes. Brushy hillsides are also a favorite habitat. It arrives early in April. I have had it as early as March 28, but this is unusual.

SLATE-COLORED JUNCO. *Junco hyemalis hyemalis*. Common winter resident. It arrives in October and remains until the middle of April. It is always very abundant from the middle of March until the first week of April. I have seen it as early as September 27 and as late as May 1.

SONG SPARROW. *Melospiza melodia melodia*. Abundant summer resident, arriving about March 17 and remaining until the middle of October. My earliest spring record is March 10; latest fall record, November 1.

LINCOLN'S SPARROW. *Melospiza lincolni lincolni*. Seen only as a migrant, but it is so shy I do not often see it. Earliest spring record, April 27.

SWAMP SPARROW. *Melospiza georgiana*. Common migrant. In the spring migration I have seen it from April 6 to May 23, and in the fall from October 10 to October 17.

FOX SPARROW. *Passerella iliaca iliaca*. Common migrant. In the spring migration I have records from March 28 to April 15, and in the fall from October 6 to October 19.

TOWHEE. *Pipilo erythrophthalmus erythrophthalmus*. The Towhee is a common migrant, but appears to be a rather scarce summer resident in the timber along the Wapsipinicon. It arrives in late April or early May, though I have seen it as early as April 10. My latest fall record is October 21. I found one nest of the Towhee on a high

wooded bluff overlooking the Wapsipinicon on June 5, 1927. The nest contained four eggs and the bird was evidently incubating at that time.

CARDINAL. *Cardinalis cardinalis cardinalis*. Fairly common permanent resident in the timbered regions. It does not often appear outside of the timber during the winter, except for occasional visits to feeding stations maintained for birds in towns and in other places.

ROSE-BREASTED GROSBEAK. *Hedymeles ludovicianus*. Rather common summer resident, usually arriving during the second week of May and remaining until early September.

INDIGO BUNTING. *Passerina cyanea*. Common summer resident, arriving about the middle of May and remaining until early September.

DICKCISSEL. *Spiza americana*. Abundant summer resident, arriving in May. The date of arrival is varied. My records for the bird, covering a twelve-year period, shows that in seven years it arrived during the last half of May, while in five years it arrived during the first half of the month. My latest fall record is September 1. It has usually disappeared by August 15.

SCARLET TANAGER. *Piranga erythromelas*. Very scarce summer resident. I quite often see it during the spring migration, but rarely during the summer. My records show the appearance of the bird to be very irregular, for it has been seen only in these years: 1917, 1919, 1920, 1923, 1924, 1926, 1928, 1930.

PURPLE MARTIN. *Progne subis subis*. Common summer resident in towns where houses are provided for the bird. It arrives about the middle of April and departs about the middle of August. I now and then see colonies of martins in the country, about a house that the farmer has provided for them, but such colonies are rare, for not many houses are provided and if such provision is made the house is almost invariably appropriated by English Sparrows which are very hard to evict. I have tried to attract martins to a house in the country for several years, but I had no success at all until 1929, when three pairs were induced to take up housekeeping on my place.

CLIFF SWALLOW. *Petrochelidon lunifrons lunifrons*. Scarce summer resident, arriving in May. I more often see Cliff Swallows in the late summer than in spring. Several Cliff Swallows attempted nesting under the eaves of the barn on the Pierce farm several years ago, and got as far as building their nest, but they were driven out by English Sparrows and did not return.

BARN SWALLOW. *Hirundo erythrogastra*. Abundant summer resident, arriving in the last week of April and remaining until early September. My latest fall record is September 20.

TREE SWALLOW. *Iridoprocne bicolor*. Common migrant in spring, flocks of hundreds often being seen. I have spring dates from April 7 to May 18. Most of the Tree Swallows have passed by early May.

BANK SWALLOW. *Riparia riparia*. Rather common summer resident, arriving in early May. Latest fall record, September 4.

ROUGH-WINGED SWALLOW. *Stelgidopteryx serripennis*. Common summer resident, arriving in the last week of April. It is much more common than the Bank Swallow.

*BOHEMIAN WAXWING. *Bombycilla garrula*. Rare visitant. Mrs. Bordner reports one that came to her garden in Lamont, remaining to eat the berries of asparagus for three days, February 15, 16, 17, 1920.

CEDAR WAXWING. *Bombycilla cedrorum*. A rather irregular visitant, for which I have many records. I have seen flocks varying from one or two birds to as many as twenty-five at various times of the year. I have one record in September, 1925; one record in May and one in August, 1926; four records in September, 1927; one record in June, 1928; one record in February, and one in March, 1929.

NORTHERN SHRIKE. *Lanius borealis*. Rare visitant. One stayed for a time in the Buffalo Creek woods near the Pierce farm during December, 1921; I saw one east of Winthrop on November 13, 1929.

MIGRANT SHRIKE. *Lanius ludovicianus migrans*. Rather common summer resident, arriving in the last two days of March or the first week in April, depending on the nature of the weather. Latest fall record, August 24.

RED-EYED VIREO. *Vireosylva olivacea*. Common summer resident, arriving about the middle of May, as a rule. I have one spring date of May 4.

WARBLING VIREO. *Vireosylva gilva gilva*. Common summer resident, arriving about the middle of May and remaining until the first week of September. I have one spring record made on April 26.

YELLOW-THROATED VIREO. *Lanivireo flavifrons*. Rare migrant. I have the following records: May 13, 1923, five birds seen along the Wapsipinicon River; May 11, 1924: two birds; May 20, 1924, one bird.

BLUE-HEADED VIREO. *Lanivireo solitarius solitarius*. A regular migrant during May, but less often observed in the fall migration. Latest fall record, September 27.

BLACK AND WHITE WARBLER. *Mniotilta varia*. Common migrant during the first week of May and about the first week of September.

PROTHONOTARY WARBLER. *Protonotaria citrea*. Rare. My only record was made on May 16, 1926, when two of the birds were observed in some willows on a sequestered pond near the Wapsipinicon River between Independence and Otterville.

BLUE-WINGED WARBLER. *Vermivora pinus*. A summer resident in the hazel-brush-covered land near the Wapsipinicon and a common migrant. It usually arrives during the second week of May; I have one record of May 4.

GOLDEN-WINGED WARBLER. *Vermivora chrysoptera*. Rare. I have but one record. I saw three in the heavy woods near the Hazleton mill-pond on May 18, 1924.

NASHVILLE WARBLER. *Vermivora ruficapilla ruficapilla*. A scarce migrant that is very hard to find, as a rule.

ORANGE-CROWNED WARBLER. *Vermivora celata celata*. A scarce migrant.

TENNESSEE WARBLER. *Vermivora peregrina*. Fairly common migrant, though there is great variation in the numbers seen from year to year. Earliest spring record, May 11.

NORTHERN PARULA WARBLER. *Compsothlypis americana pusilla*. A rather rare May migrant, for which I have but a few records.

CAPE MAY WARBLER. *Dendroica tigrina*. An irregular migrant, usually appearing after the middle of May, for which I have a few records. I have one record made on May 8.

YELLOW WARBLER. *Dendroica aestiva aestiva*. Common spring migrant, appearing early in May. It breeds in the county in rather small numbers.

*BLACK-THROATED BLUE WARBLER. *Dendroica caerulescens caerulescens*. Rare. Mrs. Bordner gives me one record. She saw one at Independence, May 18, 1915.

MYRTLE WARBLER. *Dendroica coronata*. Abundant migrant, arriving in the last half of April. During the spring migration I have records from April 16 to May 25, and in fall from September 27 to October 26.

MAGNOLIA WARBLER. *Dendroica magnolia*. Common migrant. It is most often seen during the second and third weeks of May. I have seen it as early as May 10 and as late as May 30.

CERULEAN WARBLER. *Dendroica cerulea*. The Cerulean Warbler is probably a regular migrant in the county, but it is very seldom seen because of its shyness. My only record is May 15, 1927, when I found one in the Monti woods. The bird, a male, was in a small tree about eight feet from the ground, and I studied it with an 8x glass. It was

on a cold and cloudy day, which perhaps brought this haunter of the treetops near to the ground.

CHESTNUT-SIDED WARBLER. *Dendroica pensylvanica*. A fairly common migrant, appearing from May 4 to May 25.

BAY-BREASTED WARBLER. *Dendroica castanea*. Quite rare. I have the following records (one seen on each date): May 18, 1921; May 7, 1924; May 20, 1927.

BLACK-POLL WARBLER. *Dendroica striata*. Fairly common spring migrant. My dates of its appearance are from May 13 to May 31.

BLACKBURNIAN WARBLER. *Dendroica fusca*. A regular spring migrant, but usually found in very small numbers. My spring dates are from May 7 to May 30.

BLACK-THROATED GREEN WARBLER. *Dendroica virens*. A rather irregular migrant not seen every year. My spring dates are from May 4 to May 25.

PINE WARBLER. *Dendroica vigorsi vigorsi*. A very irregular and scarce migrant.

PALM WARBLER. *Dendroica palmarum palmarum*. An abundant migrant, appearing the last week of April (April 24 is earliest date) and remaining until the middle of May. My fall dates are from September 16 to October 17.

OVEN-BIRD. *Seiurus aurocapillus*. A rather common summer resident in the timbered sections of the county, arriving from May 7 to May 16.

GRINNELL'S WATER-THRUSH. *Seiurus noveboracensis notabilis*. Common migrant. My spring dates are from May 2 to May 25; fall dates, August 31 to September 18.

LOUISIANA WATER-THRUSH. *Seiurus motacilla*. Rare. I have but one record. I found three at the borders of a small pond near the Wapsipinicon River, upriver from Independence, on May 16, 1926. They were very carefully studied with 8x glass.

CONNECTICUT WARBLER. *Oporornis agilis*. Rare. I found one in the Monti timber on May 15, 1927. It was found in bushy growth and was carefully studied with 8x glass in good light; the white eye-ring was noted. The song I heard was quite similar to the Oven-bird's.

MOURNING WARBLER. *Oporornis philadelphia*. An irregular migrant that I sometimes do not find for two or three years in succession. My spring dates are from May 12 to May 30.

MARYLAND YELLOW-THROAT. *Geothlypis trichas trichas*. Common summer resident, arriving from May 4 to the 12th and remaining until September.

WILSON'S WARBLER. *Wilsonia pusilla pusilla*. Fairly common migrant. My spring dates are from May 7 to May 25. There have been a few years in which I failed to find the bird.

CANADA WARBLER. *Wilsonia canadensis*. A regular migrant, but usually found in very small numbers. It arrives in Buchanan County about May 18.

REDSTART. *Setophaga ruticilla*. An abundant migrant and a common summer resident. It is found in the summer in nearly all tracts of natural woodland of fair size. It arrives from May 4 to May 16 and remains until September.

PIBIT. *Anthus rubescens*. An irregular visitor. My records were nearly all made while I was plowing on the farm. The bird frequents freshly plowed fields and other open country. My records are as follows: May 4, 1920 (2); April 21, 1922 (3); May 1, 1926 (1); May 4, 1926 (6); May 2, 1927 (1); May 12, 1928 (3).

CATBIRD. *Dumetella carolinensis*. A fairly common summer resident, arriving about the first week in May and remaining until late September and early October. I have one record on April 24. I think the Catbird is slowly retreating as the hedges and brush lands through the county are being cleared away. The Brown Thrasher seems to welcome the society of man and builds its nests near his homes and about his farms, while the Catbird becomes less common and retires into the woodland as man advances.

BROWN THRASHER. *Toxostoma rufum*. Common summer resident, arriving in the third and last week of April and remaining until late September. My latest fall record is October 9.

CAROLINA WREN. *Thryothorus ludovicianus ludovicianus*. Rare. My only record is given below:

"On April 20, 1923, I saw my first Carolina Wren, which, according to Anderson's *Birds of Iowa* (1907, p. 368), is very rare and local in Iowa. The bird I saw was scurrying about in a brush heap near my home. Its extra large size and rusty brown plumage at once distinguished it as a species other than our common House Wren. The white eye line was conspicuous, while the absence of white tail feather tips eliminated the possibility of its being a Bewick's Wren. Its notes were much different from the House Wren's. I saw the bird plainly and in good light."—From "April Notes from Winthrop, Iowa," in the WILSON BULLETIN, Vol. XXXV, 1923, p. 157.

WESTERN HOUSE WREN. *Troglodytes aedon parkmani*. Abundant summer resident, arriving in the last week of April and the first week in May and remaining until September.

WINTER WREN. *Nannus heimalis heimalis*. A rather scarce migrant. My spring records range from March 25 to April 22; fall records, from September 20 to October 12.

SHORT-BILLED MARSH WREN. *Cistothorus stellaris*. A fairly common summer resident in the sloughs that lie near the Independence mill-pond, but I have only rarely found it at other places in the county. My earliest spring date is May 1, and my latest fall record is September 4, but the bird no doubt remains longer than this.

PRAIRIE MARSH WREN. *Telmatodytes palustris iliacus*. About the middle of May I find a few of these birds at the Independence mill-pond. They nest there in small numbers, but are very seldom seen during the summer.

BROWN CREEPER. *Certhia familiaris americana*. The Brown Creeper is usually a scarce and irregular visitor. Most of my records were made during April. I have a few in March, quite a number in October and December, but I have not found it during January and February. It is seldom that more than two birds are seen at a time.

WHITE-BREASTED NUTHATCH. *Sitta carolinensis carolinensis*. Common permanent resident. It is more conspicuous in the winter, when other birds are scarce.

RED-BREASTED NUTHATCH. *Sitta canadensis*. Rare visitant. I have a number of records, but have never seen more than one bird at a time. The following records are all for Buchanan County: May 12, 1920; May 10, 1924; December 10 and 23, 1929; January 18, 1930.

TUFTED TITMOUSE. *Baeolophus bicolor*. Fairly common permanent resident in timbered sections of the county, but seldom seen outside of this habitat.

CHICKADEE. *Penthestes atricapillus atricapillus*. Common permanent resident.

GOLDEN-CROWNED KINGLET. *Regulus satrapa satrapa*. A common migrant and found irregularly during the winter. It arrives in spring during the first half of April and is seen again in the fall migration in October. I have a number of winter records for the bird. Nearly all of these were made on the grounds of the State Hospital at Independence, where there is a heavy shelter-belt of pine and spruce which seems to be very much to the bird's liking. A small flock was found there during January, 1927. A flock of ten was seen there at different times during December, 1929, and January, 1930, and it was evident that it spent the entire winter in the tract of trees.

RUBY-CROWNED KINGLET. *Regulus calendula calendula*. An abundant migrant in spring and common in the fall. It regularly appears

in the first or second week of April. I have seen them as early as March 28. In the fall migration the dates range from September 27 to October 19.

BLUE-GRAY GNATCATCHER. *Poliophtila caerulea caerulea*. Rare. On May 13, 1923, I saw three in the heavy woods along the Wapsipinicon River at "Boise's Bend"; on May 13, 1928, I saw another in the same location.

Mrs. Bordner found a nesting bird in Devil's Backbone State Park, Delaware County, in the summer of 1923. The nest disappeared before she had opportunity for a second visit. A severe storm loosened the bark that held the nest in the tree.

WOOD THRUSH. *Hylocichla mustelina*. The Wood Thrush breeds within the county in small numbers, I believe, but I see it only as a rather scarce migrant in May. Occasionally I see it in late summer.

VEERY. *Hylocichla fuscescens fuscescens*. Rather rare spring migrant, appearing from April 18 until the middle of May.

GRAY-CHEEKED THRUSH. *Hylocichla aliciae aliciae*. Fairly common migrant, during the first two weeks of May.

OLIVE-BACKED THRUSH. *Hylocichla ustulata swainsoni*. Fairly common migrant during the last half of May.

HERMIT THRUSH. *Hylocichla guttata pallasi*. Fairly common migrant, appearing about April 10. My earliest spring record is March 29; latest fall record, October 9.

ROBIN. *Planesticus migratorius migratorius*. Abundant summer resident, arriving about the first week in March. Occasionally their arrival is a week or more later if the weather is cold and there are early March snows. I have seen Robins as early as February 22 and 23. I recorded a flock of thirty-five on February 22, 1922. When they arrive in March, they are usually common almost at arrival. The bird remains until early November and I have seen it as late as November 21. Occasionally wintering Robins are reported, but this is unusual in Buchanan County. My only winter record was for two Robins that remained in an apple orchard and berry thicket in Winthrop during December, 1929. One of the birds had an injured wing, though it was able to fly quite well. The two birds were present much of the time during December, but in the last week of the month one of them disappeared. The remaining Robin stayed until January and managed to survive the cold and snows for a time. Food was placed on the ground for it and it ate there almost every day. About the middle of January, after a continued period of unusually cold weather,

the bird disappeared. It might have flown south, but it seems more probable that it was frozen to death or killed by a cat.

BLUEBIRD. *Sialia sialis sialis*. A common migrant, but a very scarce summer resident. It arrives from the first week of March to the third, depending on the weather prevailing in early March. I have frequently seen it in the last week of February. On February 22, 1922, I saw a flock containing thirty or more. My latest fall record is October 26. It was formerly a common summer resident, according to reports of older people. No doubt the English Sparrow's habit of driving it out of nesting places in towns and about farm homes has had much to do with its decline in numbers.

Published papers by the author which bear on the abundance and distribution of certain birds found in Buchanan County are:

"Migration of Ducks and Geese at Winthrop, Iowa." *Bird-Lore*, XXII, 1920, pp. 159-160.

"Buchanan County, Iowa, Birds." *The Oologist*, XXXVIII, 1921, pp. 4-7.

"Scarcity of Nighthawks." *Bird-Lore*, XXIII, 1921, p. 197.

"The Prairie Chicken in East Central Iowa." *The WILSON BULLETIN*, XXXIV, 1922, pp. 100-106.

"Some Iowa Owl Notes." *The WILSON BULLETIN*, XXXIV, 1922, pp. 164-166.

"Nighthawk Migration Notes." *The WILSON BULLETIN*, XXXIV, 1922, pp. 236-237.

"Some Further Iowa Owl Notes." *The WILSON BULLETIN*, XXXV, 1923, pp. 56-57.

"April Notes from Winthrop, Iowa." *The WILSON BULLETIN*, XXXV, 1923, pp. 157-159.

"The Great Horned Owls of Buffalo Creek." *Bird-Lore*, XXVI, 1924, pp. 94-96.

"Summer Birds of an Iowa Farmstead." *Bird-Lore*, XXVII, 1925, pp. 315-319.

"Lapland Longspurs at Winthrop, Iowa." *Bird-Lore*, XXIX, 1927, pp. 119-120.

"Black-bellied Plovers in Eastern Iowa." *Bird-Lore*, XXIX, 1927, pp. 416-417.

"Bird-Life at an Iowa Mill-Pond." *Bird-Lore*, XXXI, 1929, pp. 105-107.

"Winter Birds of Northeastern Iowa as Revealed by the Christmas Census." *The WILSON BULLETIN*. (In Ms.).

WINTHROP, IOWA.